

Notice of Allowability

Application No.

09/750,567

Examiner

Taylor Victor Oh

Applicant(s)

MOZELESKI ET AL.

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1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/7/05.
2. ☒ The allowed claim(s) is/are 1-4, 7-10, 12, 15-44, and 46-58, renumbered as claims 1-52.
3. ☒ The drawings filed on 18 February 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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The amendment after the final rejection filed on 4/7/05 has been entered; the previous office action has been withdrawn.

The Status of Claims

Claims 1-4, 7-10, 15-44, and 46-58 are pending.

Claims 1-4, 7-10, 15-44, and 46-58 are allowed.

Reasons for Allowance

1. The following is an examiner's statement of reasons for allowance:

The close references for the current invention are Jung et al (U.S. 4,311,851) and Takahashi et al (U.S. 4,894,188).

Jung et al teaches a preparation of carboxylic acid esters with BF_3 alcohol complex catalyst as well as the recovery and recycle of BF_3 alcohol complex catalyst used in the carbonylation of olefins such as ethylene and propylene to produce carboxylic acid esters by reacting ethylene and propylene with carbon monoxide in the presence of the catalyst prepared in using ratios of from 0.75 to 2 moles of boron trifluoride per an alcohol ($\text{ROH} : \text{BF}_3 = 1.3:1$ to $1:2$).

Takahashi et al teaches a process of producing fatty acids or their derivatives by reacting an olefin such as isobutylene, carbon monoxide, and water or reacting an alcohol or its derivative such as methyl-t-butyl ether (MTBE) and carbon monoxide in the presence of hydrogen fluoride catalyst.

The instant invention, however, differs from the prior art in that the claimed molar ratio of $\text{ROH} : \text{BF}_3$ is from $2:1$ to $4:1$ unlike the Jung's molar ratio of $\text{ROH} : \text{BF}_3$ is $1.3:1$ to $1:2$; furthermore, none of the prior art have failed to provide any motivation

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to arrive at the claimed molar ratio range ,especially when one of the prior art ,the Jung's negative teaching, is reviewed; for example, in contrast to the 1:1 molar ratio catalyst, the use of the mixture of $\text{BF}_3\text{CH}_3\text{OH}$ and $\text{BF}_3 \cdot 2\text{CH}_3\text{OH}$ is non-selective to the desired product and of relatively low activity (see col . 4 ,lines 43-47). Moreover, applicants' invention have advantages over the prior art : no need for recycling the highly corrosive uncomplexed ROH-BF_3 and no requirement of special operational handling and specialized process units. Therefore, the combination of the Takahashi process and the Jung's catalyst will not lead to the claimed process of making the ester. In addition, unless all limitations of the claims are met, there is no prior art rejection. See In re Zurko 59 USPQ 2d 1690 (Fed Cir. 1991) and In re Lee, 61 USPQ 1430 (Fed Cir. 1991).

Therefore, applicants' claimed subject matter would not have been obvious to the person with an ordinary skill in the art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning the communication after allowance such as sending all post-allowance correspondence should be directed to " Box Issue Fee" or faxed directly to PUBS at 703-305-8755. This will expedite the process of these papers.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Cecilia J. Tsang
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